

SEQUENCE LISTING

<110> Anziano, Paul Q.

<120> Manganese Superoxide Dismutase Exon 3-Deleted Isoforms
and Nucleic Acid Molecules Encoding the Isoforms

<130> 53073-0001-US

<140> US 09/623,025

<141> 2001-01-16

<150> US 60/075,948

<151> 1998-02-25

<150> PCT/US99/04129

<151> 1999-02-25

<160> 14

<170> PatentIn Ver. 2.1

<210> 1

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(552)

<223> Isoform of MnSOD E3(-)

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ttg ggg tat ctg ggc tcc agg cag aag cac agc ctc ccc gac ctg ccc	96
Leu Gly Tyr Leu Gly Ser Arg Gln Lys His Ser Leu Pro Asp Leu Pro	
20 25 30	
tac gac tac ggc gcc ctg gaa cct cac atc aac gcg cag atc atg cag	144
Tyr Asp Tyr Gly Ala Leu Glu Pro His Ile Asn Ala Gln Ile Met Gln	
35 40 45	
ctg cac cac agc aag cac cac gcg gcc tac gtg aac aac ctg aac gtc	192
Leu His His Ser Lys His His Ala Ala Tyr Val Asn Asn Leu Asn Val	
50 55 60	
acc gac gag aag tac cag gag gcg ttg gcc aag ggg gag ttg ctg gaa	240
Thr Asp Glu Lys Tyr Gln Glu Ala Leu Ala Lys Gly Glu Leu Leu Glu	
65 70 75 80	
gcc atc aaa cgt gac ttt ggt tcc ttt gac aag ttt aag gag aag ctg	288
Ala Ile Lys Arg Asp Phe Gly Ser Phe Asp Lys Phe Lys Glu Lys Leu	
85 90 95	

acg gct gca tct gtt ggt gtc caa ggc tca ggt tgg ggt tgg ctt ggt	336
Thr Ala Ala Ser Val Gly Val Gln Gly Ser Gly Trp Gly Trp Leu Gly	
100 105 110	
ttc aat aag gaa cgg gga cac tta caa att gct gct tgt cca aat cag	384
Phe Asn Lys Glu Arg Gly His Leu Gln Ile Ala Ala Cys Pro Asn Gln	
115 120 125	
gat cca ctg caa gga aca aca ggc ctt att cca ctg ctg ggg att gat	432
Asp Pro Leu Gln Gly Thr Thr Gly Leu Ile Pro Leu Leu Gly Ile Asp	
130 135 140	
gtg tgg gag cac gct tac tac ctt cag tat aaa aat gtc agg cct gat	480
Val Trp Glu His Ala Tyr Tyr Leu Gln Tyr Lys Asn Val Arg Pro Asp	
145 150 155 160	
tat cta aaa gct att tgg aat gta atc aac tgg gag aat gta act gaa	528
Tyr Leu Lys Ala Ile Trp Asn Val Ile Asn Trp Glu Asn Val Thr Glu	
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Arg Tyr Met Ala Cys Lys Lys	
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Ala	Ile	Lys	Arg	Asp	Phe	Gly	Ser	Phe	Asp	Lys	Phe	Lys	Glu	Lys	Leu		
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Thr	Ala	Ala	Ser	Val	Gly	Val	Gln	Gly	Ser	Gly	Trp	Gly	Trp	Leu	Gly		
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Phe	Asn	Lys	Glu	Arg	Gly	His	Leu	Gln	Ile	Ala	Ala	Cys	Pro	Asn	Gln		
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	130				135					140							
Val	Trp	Glu	His	Ala	Tyr	Tyr	Leu	Gln	Tyr	Lys	Asn	Val	Arg	Pro	Asp		
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Tyr	Leu	Lys	Ala	Ile	Trp	Asn	Val	Ile	Asn	Trp	Glu	Asn	Val	Thr	Glu		
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<210> 3
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 <213> Artificial Sequence

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 2-exon 4 junction

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 <213> Artificial Sequence

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 exon 1 forward

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 exon 5 reverse

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 <212> DNA
 <213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR primer,
exon 2 forward

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<210> 8
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<212> DNA
<213> Artificial Sequence

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exon 4 reverse

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primer, 1F

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primer, 710R

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 <223> intron between exons 2 and 4 of MnSOD gene (splice variant)

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SEQUENCE LISTING

<110> University of Nevada-Reno, Richard Bjur, PhD, JD

<120> Identification of Oxidant Isoform of Human MnSOD

<130> unevadareno5013

<140> unfiled

<141> 1999-02-25

<160> 11

<170> PatentIn Ver. 2.0

<210> 1

<211> 552

<212> DNA

<213> human dna and protein segment

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<221> CDS

<222> (1) (549)

<223> SEQ ID NO:1

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Met Leu Ser Arg Ala Val Cys Gly Thr Ser Arg Gln Leu Pro Pro Val	
1 5 10 15	
ttg ggg tat ctg ggc tcc agg cag aag cac agc ctc ccc gac ctg ccc	96
Leu Gly Tyr Leu Gly Ser Arg Gln Lys His Ser Leu Pro Asp Leu Pro	
20 25 30	
tac gac tac ggc gcc ctg gaa cct cac atc aac gcg cag atc atg cag	144
Tyr Asp Tyr Gly Ala Leu Glu Pro His Ile Asn Ala Gln Ile Met Gln	
35 40 45	
ctg cac cac agc aag cac cac gcg gcc tac gtg aac aac ctg aac gtc	192
Leu His His Ser Lys His His Ala Ala Tyr Val Asn Asn Leu Asn Val	
50 55 60	
acc gac gag aag tac cag gag gcg ttg gcc aag ggg gag ttg ctg gaa	240
Thr Asp Glu Lys Tyr Gln Glu Ala Leu Ala Lys Gly Glu Leu Leu Glu	
65 70 75 80	
gcc atc aaa cgt gac ttt ggt tcc ttt gac aag ttt aag gag aag ctg	288
Ala Ile Lys Arg Asp Phe Gly Ser Phe Asp Lys Phe Lys Glu Lys Leu	

	85	90	95	
acg gct gca tct gtt ggt gtc caa ggc tca ggt tgg ggt tgg ctt ggt				336
Thr Ala Ala Ser Val Gly Val Gln Gly Ser Gly Trp Gly Trp Leu Gly				
	100	105	110	
ttc aat aag gaa cgg gga cac tta caa att gct gct tgt cca aat cag				384
Phe Asn Lys Glu Arg Gly His Leu Gln Ile Ala Ala Cys Pro Asn Gln				
	115	120	125	
gat cca ctg caa gga aca aca ggc ctt att cca ctg ctg ggg att gat				432
Asp Pro Leu Gln Gly Thr Thr Gly Leu Ile Pro Leu Leu Gly Ile Asp				
	130	135	140	
gtg tgg gag cac gct tac tac ctt cag tat aaa aat gtc agg cct gat				480
Val Trp Glu His Ala Tyr Tyr Leu Gln Tyr Lys Asn Val Arg Pro Asp				
	145	150	155	160
tat cta aaa gct att tgg aat gta atc aac tgg gag aat gta act gaa				528
Tyr Leu Lys Ala Ile Trp Asn Val Ile Asn Trp Glu Asn Val Thr Glu				
	165	170	175	
aga tac atg gct tgc aaa aag taa				552
Arg Tyr Met Ala Cys Lys Lys				
	180			

<210> 2

<211> 183

<212> PRT

<213> human dna and protein segment

<400> 2

Met	Leu	Ser	Arg	Ala	Val	Cys	Gly	Thr	Ser	Arg	Gln	Leu	Pro	Pro	Val
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Leu	Gly	Tyr	Leu	Gly	Ser	Arg	Gln	Lys	His	Ser	Leu	Pro	Asp	Leu	Pro
			20					25					30		

Tyr	Asp	Tyr	Gly	Ala	Leu	Glu	Pro	His	Ile	Asn	Ala	Gln	Ile	Met	Gln
		35					40					45			

Leu	His	His	Ser	Lys	His	His	Ala	Ala	Tyr	Val	Asn	Asn	Leu	Asn	Val
		50				55					60				

Thr	Asp	Glu	Lys	Tyr	Gln	Glu	Ala	Leu	Ala	Lys	Gly	Glu	Leu	Leu	Glu
	65					70				75					80

Ala Ile Lys Arg Asp Phe Gly Ser Phe Asp Lys Phe Lys Glu Lys Leu
 85 90 95

Thr Ala Ala Ser Val Gly Val Gln Gly Ser Gly Trp Gly Trp Leu Gly
 100 105 110

Phe Asn Lys Glu Arg Gly His Leu Gln Ile Ala Ala Cys Pro Asn Gln
 115 120 125

Asp Pro Leu Gln Gly Thr Thr Gly Leu Ile Pro Leu Leu Gly Ile Asp
 130 135 140

Val Trp Glu His Ala Tyr Tyr Leu Gln Tyr Lys Asn Val Arg Pro Asp
 145 150 155 160

Tyr Leu Lys Ala Ile Trp Asn Val Ile Asn Trp Glu Asn Val Thr Glu
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Arg Tyr Met Ala Cys Lys Lys
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<210> 3
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<210> 4
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<400> 4
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